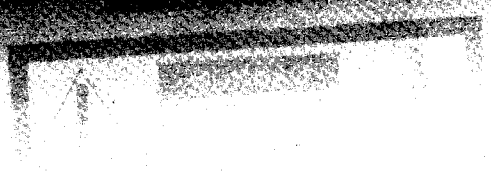


SONY

**MDP-210**

**MDP-322GX**



# Owner's Record

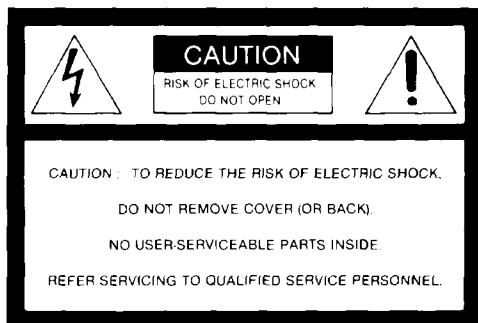
The model number is located at the rear. The serial number is located on the top panel. Record the serial number in the space provided below.

Refer to them whenever you call upon your Sony dealer regarding this product.

Model No. \_\_\_\_\_ Serial No. \_\_\_\_\_

## WARNING

**To prevent fire or shock hazard, do not expose the unit to rain or moisture.**



This symbol is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



This symbol is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

## INFORMATION

This equipment generates and uses radio frequency energy and if not installed and used properly, that is, in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with the limits for a Class B computing device in accordance with the specifications in Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient the receiving antenna
- Relocate the equipment with respect to the receiver
- Move the equipment away from the receiver
- Plug the equipment into a different outlet so that equipment and receiver are on different branch circuits.

If necessary, the user should consult the dealer or an experienced radio/television technician for additional suggestions. The user may find the following booklet prepared by the Federal Communications Commission helpful:

"How to Identify and Resolve Radio-TV Interference Problems". This booklet is available from the U.S. Government Printing Office, Washington, DC 20402, Stock No. 004-000-00345-4.

## CAUTION

The use of optical instruments with this product will increase eye hazard.

As the laser beam used in this videodisc player is harmful to the eyes, do not attempt to disassemble the cabinet. Refer servicing to qualified personnel only.

## CAUTION:

**TO PREVENT ELECTRIC SHOCK, DO NOT USE THIS POLARIZED AC PLUG WITH AN EXTENSION CORD, RECEPTACLE OR OTHER OUTLET UNLESS THE BLADES CAN BE FULLY INSERTED TO PREVENT BLADE EXPOSURE.**

## NOTICE FOR THE CUSTOMERS IN CANADA

This apparatus complies with the Class B limits for radio noise emissions set out in Radio Interference Regulations.

# Contents

This manual covers the MDP-210 verified to the FCC rules and available in the U.S.A. and Canada, the MDP-322GX available in other countries and the MDP-322GX tourist model. Operations are the same regardless of the model name. Specifications vary only with regard to power requirements and AC outlet on the unit.

	Precautions .....	4
	Operating voltage .....	4
	Features .....	5
<b>Introduction</b>	Location and function of controls .....	6
	Front panel .....	6
	Rear panel .....	6
	Remote Commander .....	8
	Rear panel .....	10
<b>Connections</b>	To connect to audio system and to TV with video inputs .....	11
	To connect to TV without audio/video inputs .....	12
	Screen messages .....	15
	To play a disc .....	16
	To change playback speed and direction .....	20
	To play frame by frame .....	20
	To search for a particular scene .....	22
<b>Operation</b>	Scanning .....	22
	Searching by chapter/track number .....	23
	Searching by frame number .....	24
	Searching by time .....	24
	To play repeatedly .....	25
	To play only certain chapters/tracks .....	25
	To search for a particular selection .....	28
<b>CD/CDV</b>	To change time display .....	30
	To play repeatedly .....	31
	To play only certain selections .....	32
	Auto pause .....	32
<b>LD/CD/CDV</b>	Auto space .....	32
	Custom index .....	34
	Shuffle playback .....	35
	Specifications .....	35
<b>Others</b>	Notes on handling discs .....	35
	Glossary .....	35
<b>Troubleshooting</b>	Troubleshooting .....	Back cover

# Precautions

## On safety

- Should any solid object or liquid enter the cabinet, unplug the unit and have it checked by qualified personnel before operating it any further.
- Unplug the unit from the wall outlet if it is not to be used for an extended period of time.  
To disconnect a cord, pull it out by the plug. Never pull the cord itself.
- One blade of the plug is wider than the other for the purpose of safety and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.

## On installation

- Avoid placing the player in a location subject to:
  - high humidity
  - high temperature
  - excessive dust
  - mechanical vibration
  - direct sunlight
- Allow adequate air circulation to prevent internal heat buildup. Do not place the unit on surfaces (rugs, blankets, etc.) or near materials (curtains, draperies) that may block the ventilation holes.

## On moisture condensation

- Do not operate the unit right after having transported it from a cold location to a warm location or in a room where the temperature rises suddenly, because moisture may condense in the operating section of the unit. Wait for about an hour before turning the power on in the new location or keep the rise in room temperature gradual. If the unit is operated with moisture condensation, the unit and the disc may be damaged. Therefore remove the disc immediately when there is a possibility of moisture condensation and no picture is obtained. To evaporate the moisture rapidly, leave the player turned on without a disc loaded.

## On operation

- Remove the disc from the tray after playing it, if the unit will not be used for any length of time. Do not transport the set with a disc in place.
- When the disc tray is in the open position, do not press down on it strongly, or place heavy objects on it.

## On cleaning

Clean the cabinet, panel and controls with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent, such as alcohol or benzene, which may damage the finish.

## On repacking

Do not throw away the carton and the packing material. They make an ideal container to transport the unit in.

If you have any question or problem concerning your unit, please contact your nearest Sony dealer.

# Operating Voltage

Before operating the unit, be sure that the operating voltage of your unit is identical with that of your local power supply.

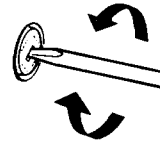
MDP-210: 120 V AC, 60 Hz.

MDP-322GX: 100, 120, 220, 240 V AC, 50/60 Hz.

MDP-322GX tourist model: 120, 220, 240 V AC, 50/60 HZ.

For the MDP-322GX, the voltage selector is located at the rear.

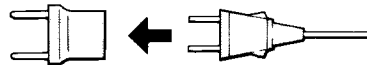
If the selector must be reset, **disconnect the AC power cord** and turn the selector with a minus screwdriver so that the arrow on the selector points to the appropriate voltage.



## How to use the AC power plug adaptor (supplied with the MDP-322GX)

E01651

If the AC plug of your unit does not fit the wall outlet, attach the supplied AC plug adaptor.

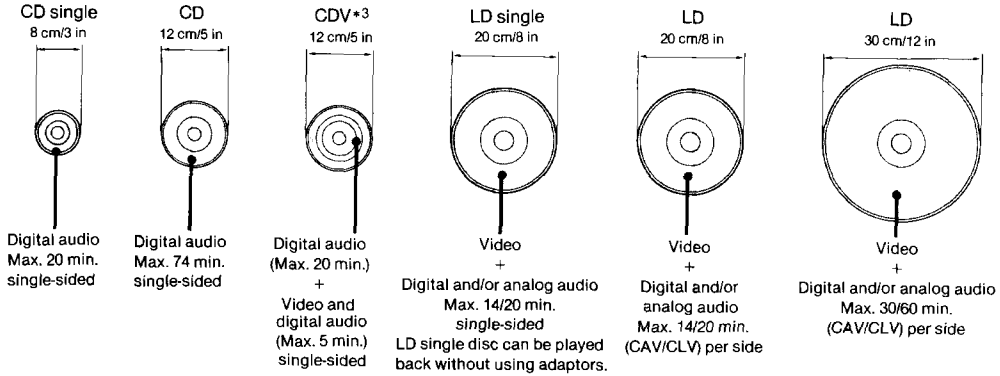


## For the customers in the USA

For detailed safety precautions, see the leaflet "IMPORTANT SAFEGUARDS".

# Features

This CD VIDEO System CD/CDV/LD Player\*1 can play all six types of optical discs currently available for home entertainment use:\*2



The following functions are available with this unit.

For the CDV disc, CD functions can be used on the audio portion and LD functions can be used on the video portion.

## LD/CD/CDV

- **Custom index**  
Specify up to six index marks at any point on the disc, for convenient playback start at the push of a button.
- **Program play**  
Play back chapters or tracks in any desired order.
- **Shuffle play**  
Play all selections on a disc in random order.
- **Auto disc protection**  
Prevents damage to the disc during playback stop, etc.
- **AV calendar display**  
Shows the number of tracks (up to 20) on a disc and the total playing time at a glance.

## LD/CDV (Video Portion)

- **Variable speed playback**  
11 speed settings for normal and reverse playback, step (frame-by-frame) playback and high-quality freeze-frame.
- **Memory stop (LD only)**  
Resume playback from the last scene viewed.
- **Clear visual scan**  
Fast scan without picture distortion even on CLV discs.

## CDV

- **CDV button**  
Permits quick switching between the video and audio portion of a disc.
- **Video portion**  
All LD functions are available.
- **Audio portion**  
All CD functions are available.

\*1 "CD VIDEO system" refers to all hardware that combines the features of a CD player and an LD player in one unit and is able to play CDV discs.



\*2 This unit plays back discs with any of the following logos on the label.

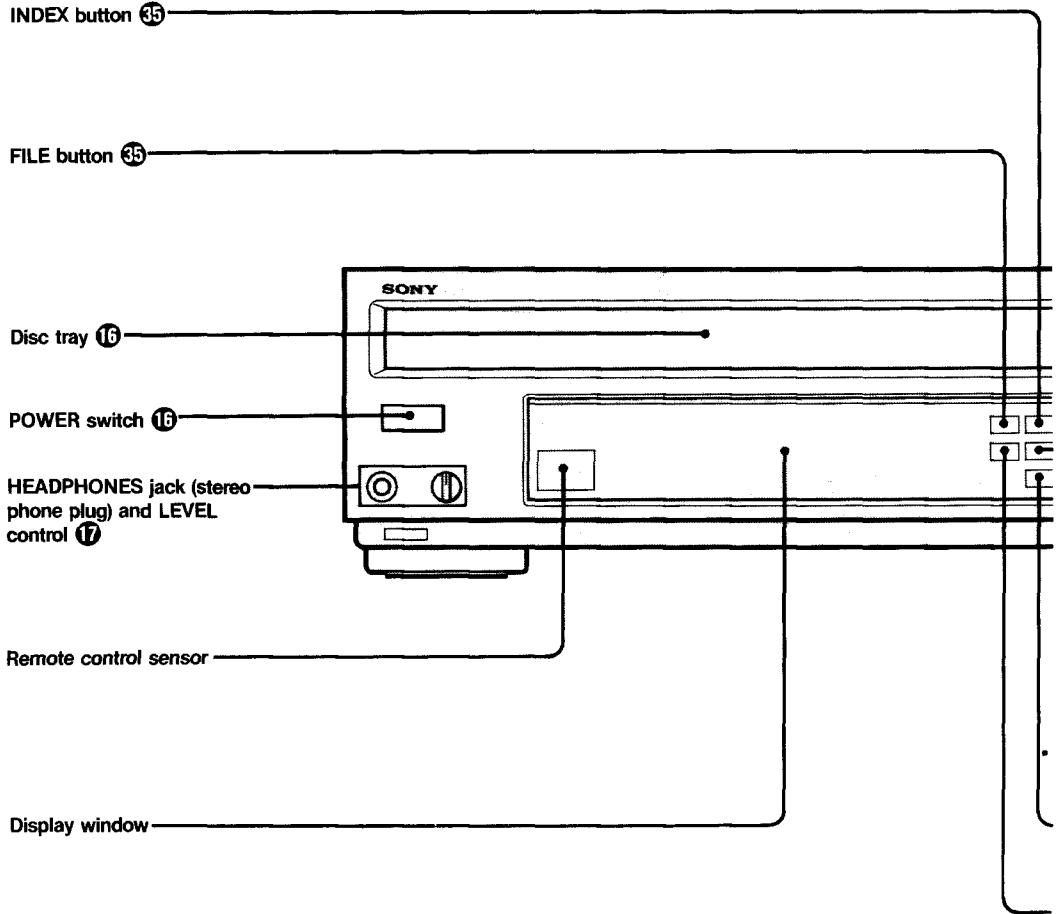


\*3 The Compact Disc Video (CDV) format divides a CD into two sections. One is 20 minutes of digital audio playable on any CD player. The other, 5 minutes of video and digital audio, requires a CDV player.

- It cannot playback CED or VHD discs or discs with PAL, SECAM, or video signals other than the NTSC standard.

# Location and Function of Controls

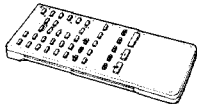
## Front panel



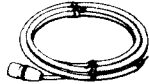
## Accessories

The shipping box should contain the following accessories.

RMT-322A Remote Commander



Coaxial cable with F-type connector



for MDP-322GX

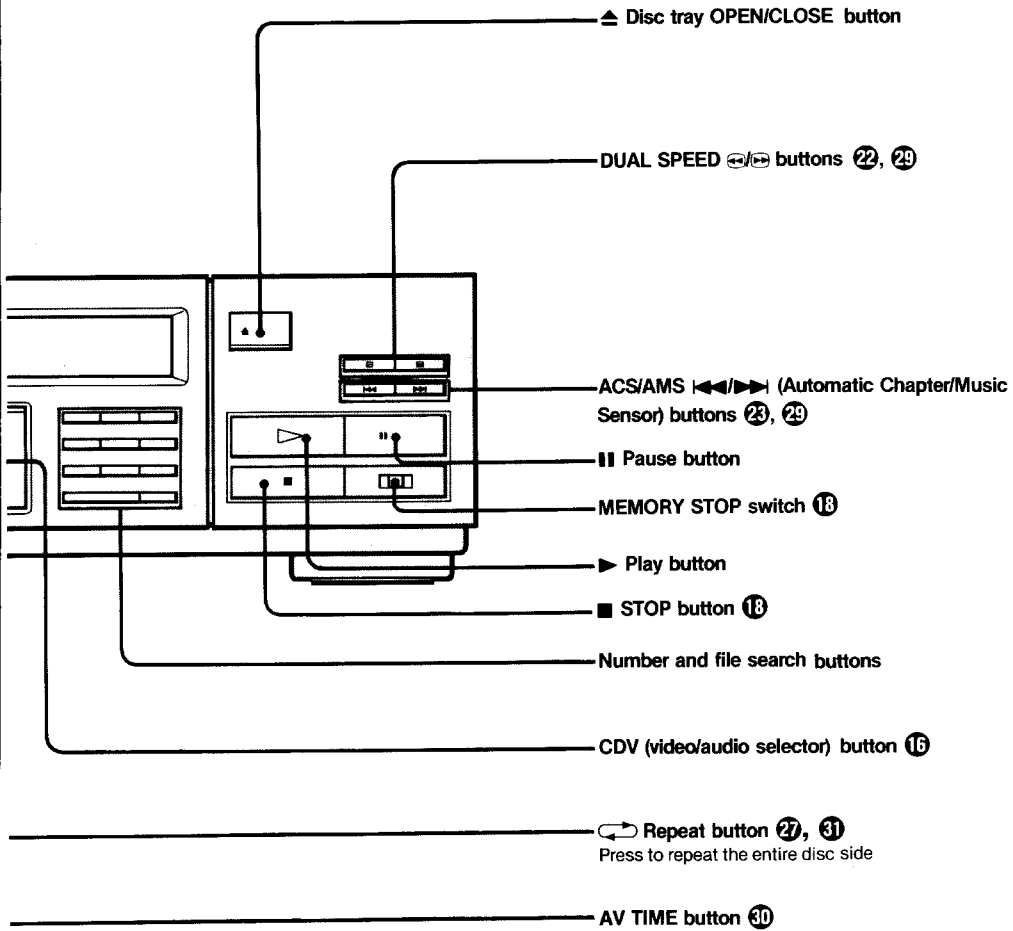


for MDP-210

External antenna connector



for MDP-322GX only



Two size AA (R6) batteries



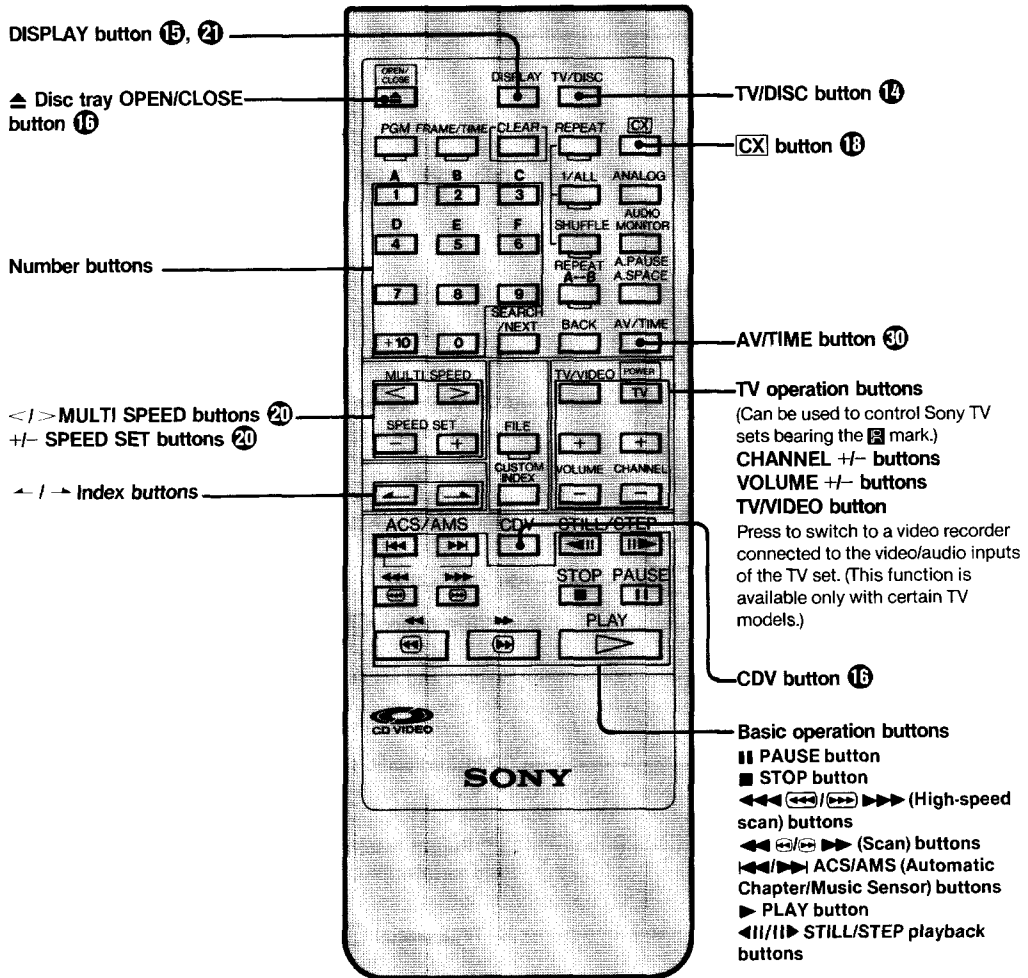
Video connecting cord  
(phono 1 ↔ phono 1)



Audio connecting cord  
(phono 2 ↔ phono 2)



## Remote Commander



### Remote Commander Precautions

- Do not let sunlight or light from a powerful artificial light source fall directly on the Remote Commander sensor on the front panel as it may interfere with operation or damage the sensor.
- Connecting the Control S input jack on the rear of the unit to the Control S output jack on a TV set or other piece of equipment deactivates the sensor on the front and shifts operation to the sensor on the other equipment. In this case, point the Remote Commander at the latter equipment's sensor and not at the disc player.



CLEAR button 25, 29, 33

FRAME/TIME button 24

PGM program button 28, 32

File Search (A - F) buttons 35

SEARCH/NEXT button 25

BACK button 29, 33, 37

REPEAT button 26, 31, 35

1/ALL button 26, 31, 35

ANALOG audio button 19

SHUFFLE button 36

AUDIO MONITOR button 19

A ↔ B REPEAT button 27, 31

A. (Automatic) PAUSE/

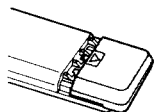
A. (Automatic) SPACE button 32

FILE button 35

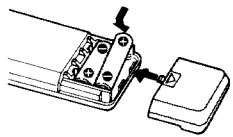
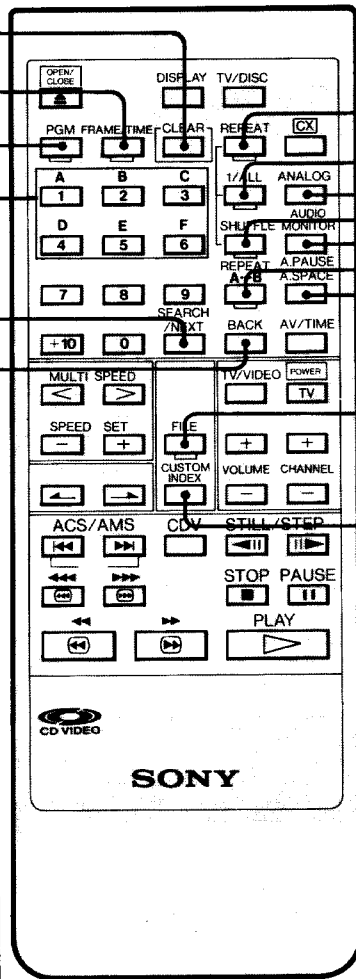
CUSTOM INDEX button 35

### Battery insertion

**1**



**2** Insert the two size AA batteries as shown, being careful to match +/- polarities.

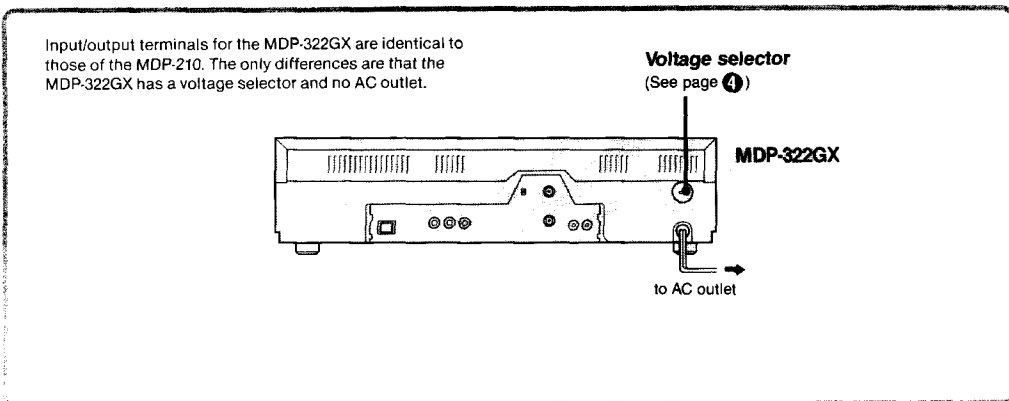
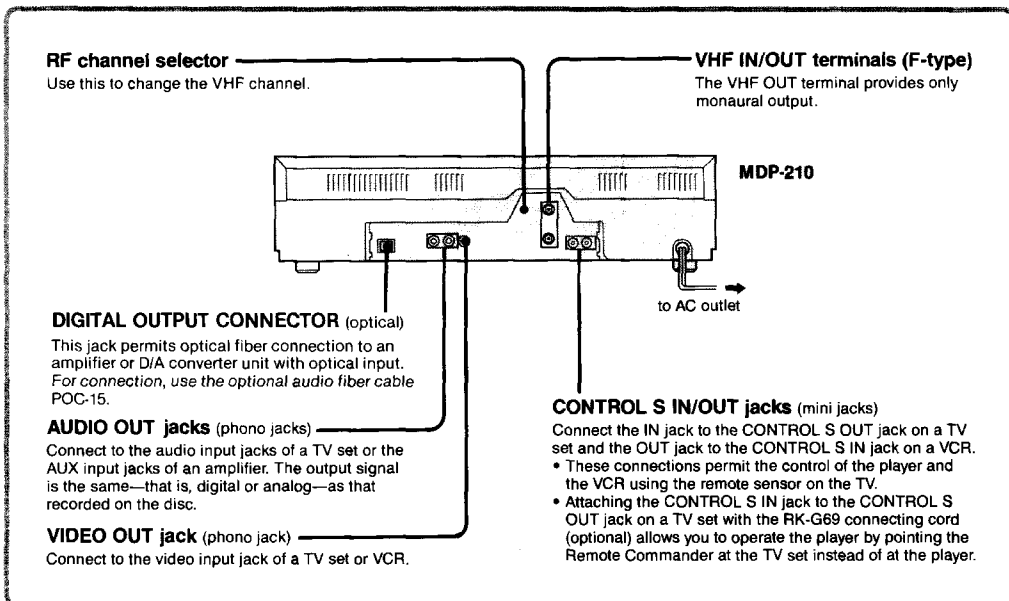



#### Battery life

In normal operation, batteries will last for about six months. If the operating range of the Remote Commander becomes noticeably short, replace the batteries with new ones.

If the Remote Commander is not to be used for a long period of time, remove the batteries to avoid possible damage from battery leakage.

# Rear Panel



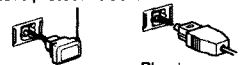
## Connection Precautions

- Make sure that all equipment is OFF before connecting or disconnecting any cables.
- Check the color of the plugs: yellow indicates video; white, left audio channel; red, right audio channel.
- Firmly insert the plugs into the jacks. A loose connection can lead to noise.
- When unplugging a cable, grasp the plug. Never pull on the cable.
- To prevent interference, turn off all equipment that is connected, but not currently in use.

- If there is noise in the audio or video output, try moving the equipment further apart.
- Connection methods differ. When in doubt, consult the manufacturer's manual.

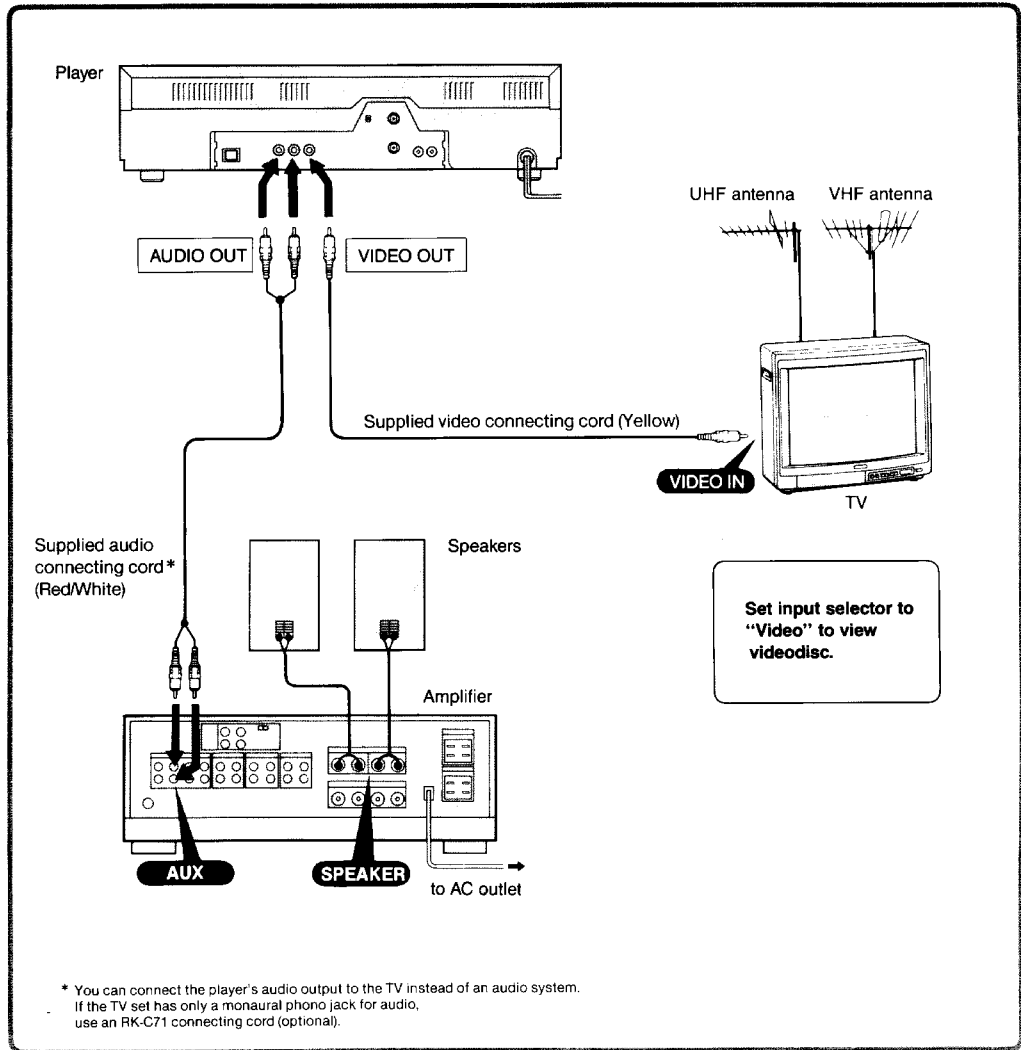
### Connection of optical fiber cable

Remove protective cover.



Plug in connector firmly.

# To Connect to Audio System and to TV with Video Inputs



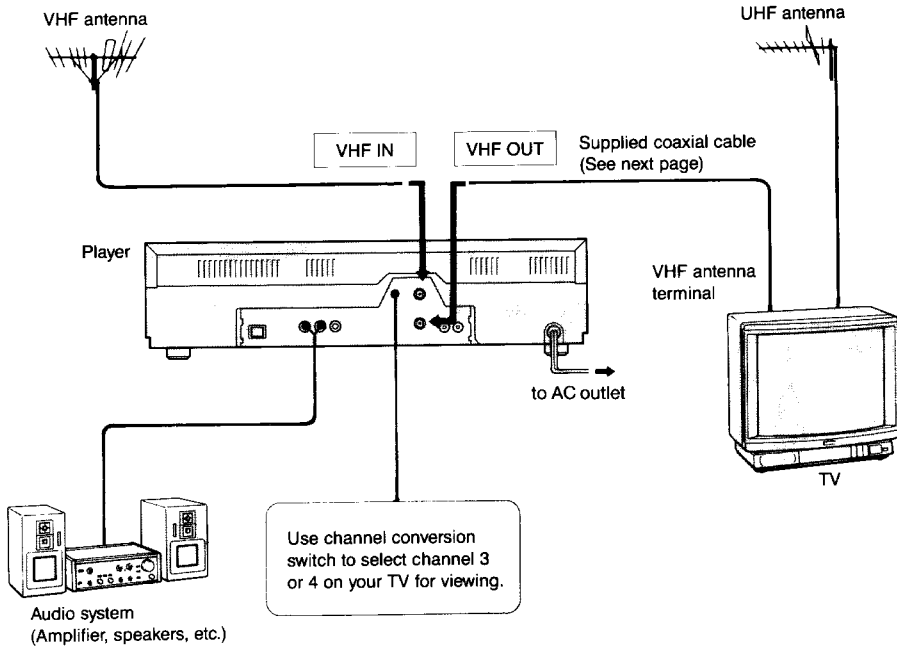
## During FM or AM reception

Turn off the power to the player to prevent the possibility of noise interference.

# To Connect to TV without Audio/video Inputs

## 1 Connect the VHF antenna and TV to the player.

See next page for details.



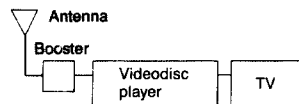
Connect to an audio system for reproduction in stereo. (See preceding page.)

The sound from discs is always monaural when played over TV speakers—even with stereo TV sets.

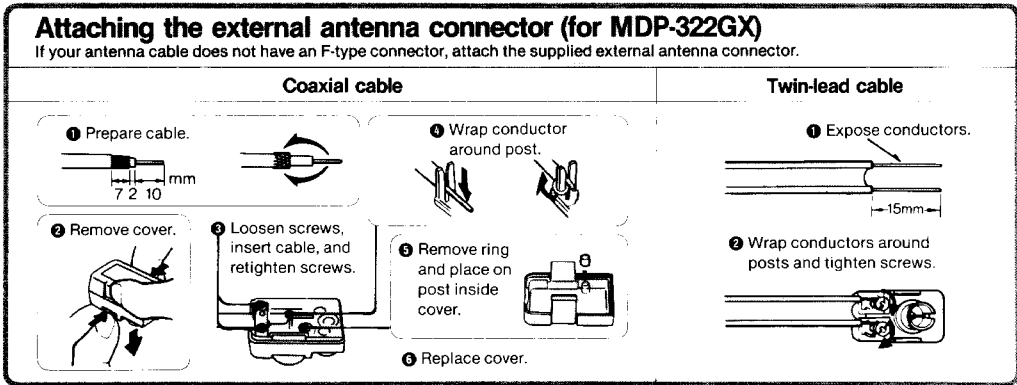
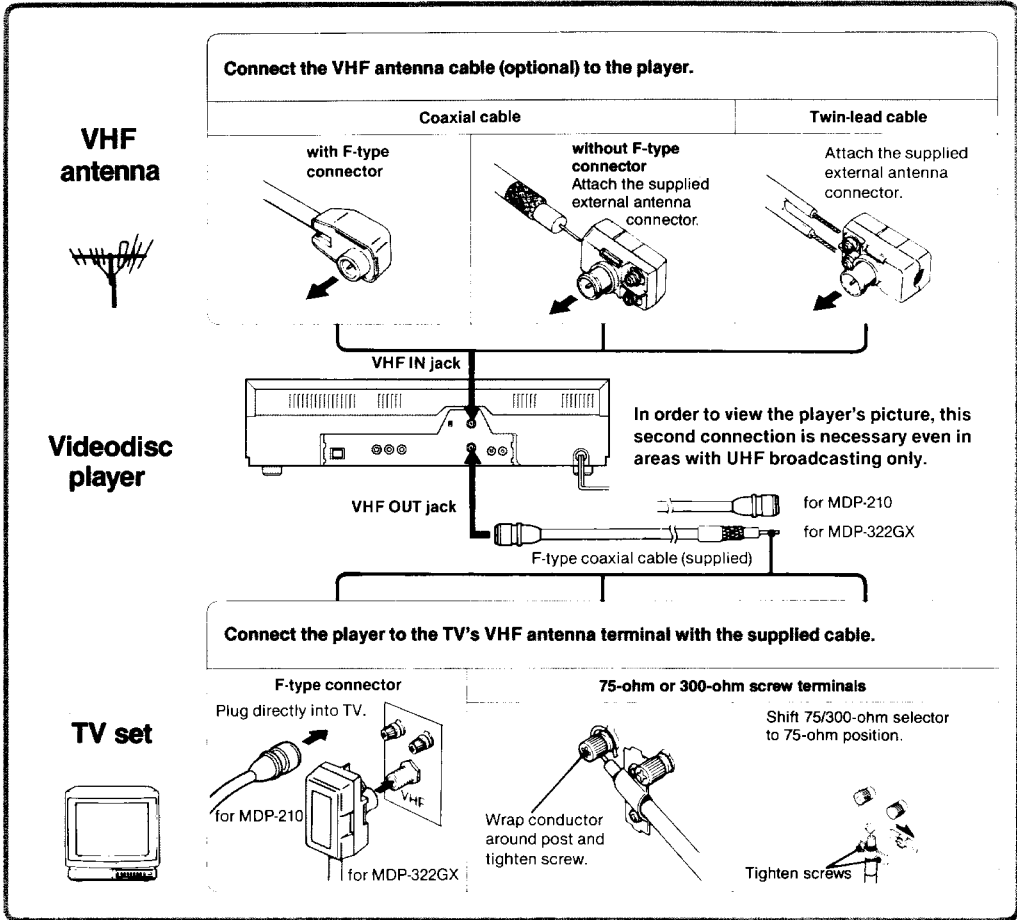
To obtain a better picture  
Always switch off the player when watching a TV programme.

### Using a booster

If the TV signal is already weak, inserting the videodisc player between the antenna and the TV set may weaken it further, significantly degrading the picture. In such a situation, a signal booster is highly recommended.

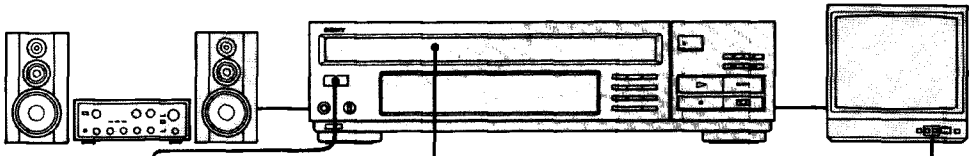


Ask your dealer to recommend a suitable booster for your area.

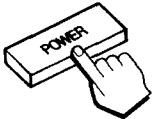


## 2 Select the channel for videodisc playback.

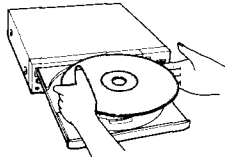
**1** Set channel selector on rear panel to an unused channel.



**2** Turn on the player.



**3** Press the OPEN/CLOSE button and open the disc tray. Insert the disc and start playback.



**4** Turn on the TV and switch to the selected channel.

The TV then receives the videodisc signals on the selected channel. The videodisc picture should appear.

**To watch videodiscs, always set the TV to the selected channel.**

### Why is it necessary to select 3 or 4?

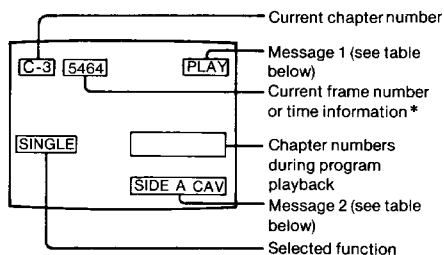
The videodisc player sends its output to the TV as a VHF broadcast signal. Selecting an unused channel avoids interfering with regular broadcasts.

When watching regular TV programs, turn the player off or press the TV/DISC button on the Remote Commander so that the player's display window shuts off. If TV picture quality is not satisfactory, refer to the manufacturer's manual and adjust the reception.

# Screen Messages

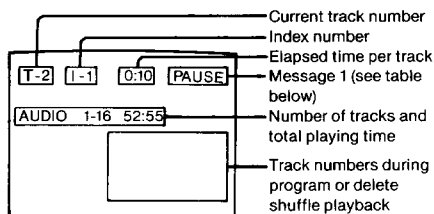
Information on the operating condition of the unit and chapter or track numbers can be superimposed on the TV or monitor screen. While no image is displayed, such as during search, information for LD and CDV is shown on a blue background and information for CD is shown on a green background.

## LD

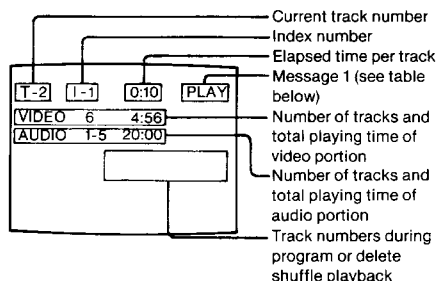


\* If seconds are not recorded on the disc, only "0:22" is shown.

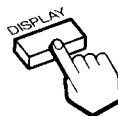
## CD



## CDV



### To call up the on-screen display



Remote commander

Press the button again to turn the display off.

### Message 1

(Examples)

Display	Explanation
OPEN	Disc table open
CLOSE	Disc table closed
PLAY	Playback
STOP	Stop
PAUSE	Pause
	Forward/reverse speed scan
SEARCH	Search
	1/2 speed display in forward direction

### Message 2

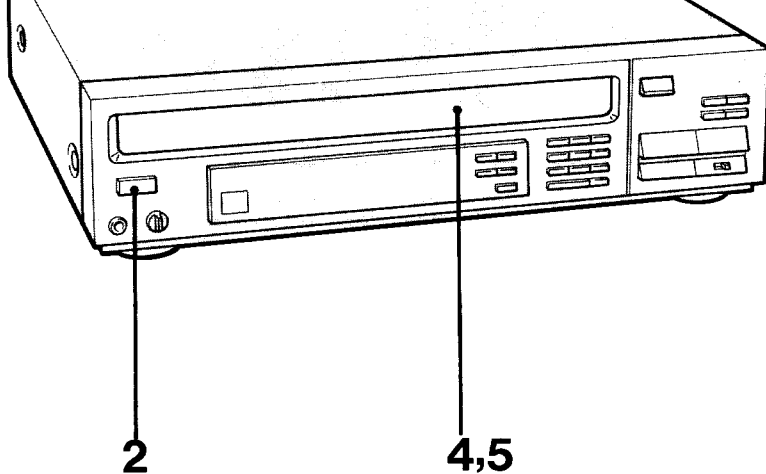
(Examples)

Display	Explanation
SIDE A CAV	Standard-play disc side A
SIDE B CAV	Standard-play disc side B
SIDE A CLV	Long-play disc side A
SIDE B CLV	Long-play disc side B
1L	Main soundtrack/left channel
2R	Second soundtrack/right channel
	Digital sound
	Analog sound

### LD precaution

Some discs do not contain the side A or B identification code. In this case, the disc side indication may not be correct.

## To Play a Disc



Identical buttons on the main unit can also be used.

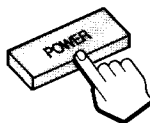
### 1 Turn on the TV and stereo system.

TV: Select the channel used for videodisc playback or the video input. (See p. 10)

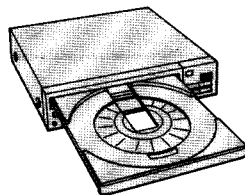
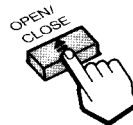
Stereo system:

Turn on the amplifier or receiver and select the proper audio input.

### 2 Turn on the player.



### 3 Open the disc tray.



#### Using an optional timer

To automatically start playback with an optional timer, leave the POWER switch of the disc player in the depressed position. When the timer supplies power at the preset time, the unit turns on and playback begins.

#### To pause at the beginning of a disc

Press the II button on the player or the Remote Commander. The tray closes, and the player pauses at the beginning of the disc.

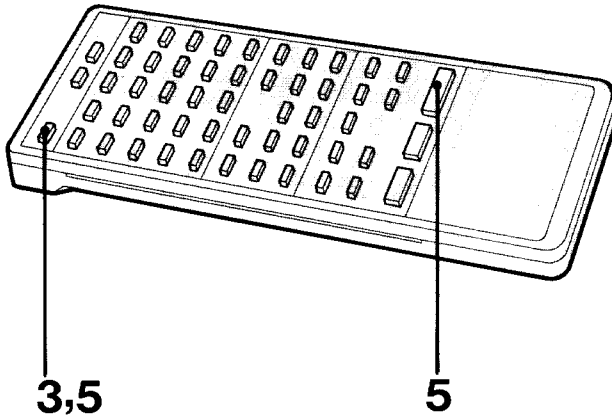
#### AV calendar

When playing a CD, CDV, or an LD containing TOC (Table of Contents) data, the AV calendar shows information on the total number of selections. As selections are played, the corresponding numbers on the display go out.

#### To switch between the video portion and the audio portion

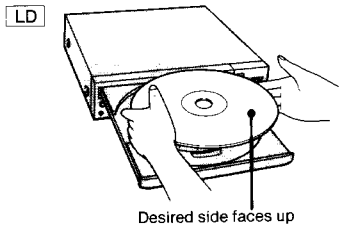
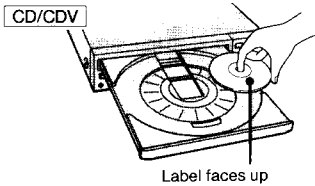
Use the CDV button to locate the desired selection.



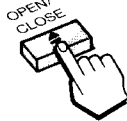


## 4 Place the disc on the tray.

Place the disc on the center of the tray. If the disc is not placed correctly, playback may not start.



## 5 Start playback.



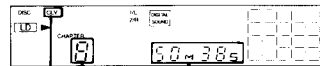
or



CDV playback starts from the video portion.

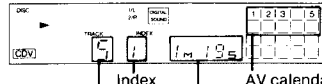
### Playback display

#### LD

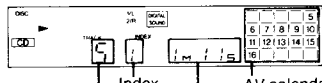


Type of LD

#### CD/CDV Audio portion



#### CDV Video portion



#### Notes on disc tray

- Insert only one disc at a time.
- Make sure that the disc is placed properly in the tray. Incorrect positioning may result in permanent damage to the disc.

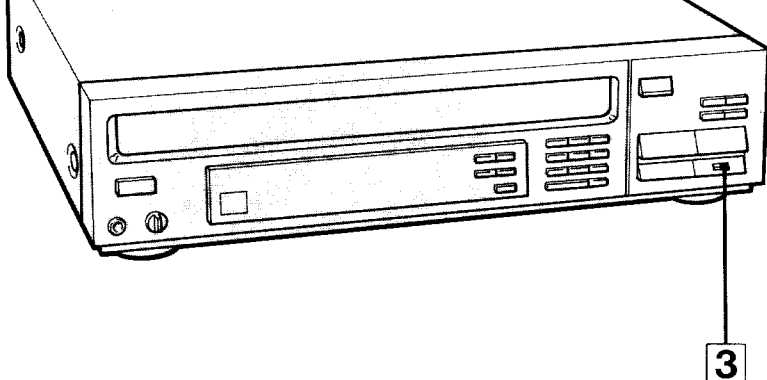
#### When listening with headphones

Plug stereo headphones into the PHONES jack and adjust the listening volume with the LEVEL control.

#### Warning

Do not insert a hand or finger in the player while it is operating. Although the player will stop automatically if an object is inserted while in play, serious injury could result. Be sure to place the unit out of the reach of small children.

# To Play a Disc



Identical buttons on the main unit can also be used.

## To temporarily interrupt playback

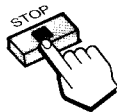
1



When playing CAV discs, the sound is cut off and a still picture is shown. When playing other discs, the unit enters the pause condition. To resume play from the same point, press the ► button.

## To stop playback

2

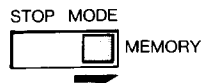


Press the ► button to restart playback from the beginning of the disc.

## To stop playback and resume at the same point later

3

LDのみ



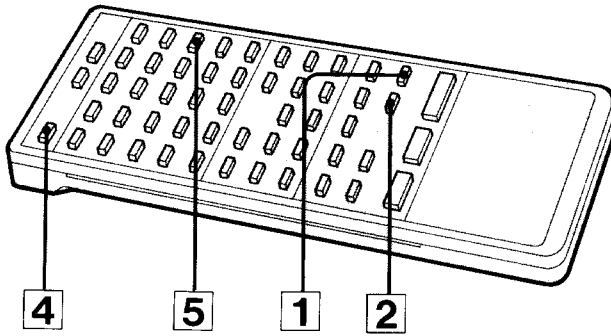
Set the MEMORY STOP switch on the main unit to MEMORY.

### Memory stop precaution

- Pressing any button other than ► or ■ (the OPEN button, in particular) deactivates the MEMORY STOP function.
- The MEMORY STOP function is only approximate. There may be a slight difference of a few frames between the stopping and starting positions when you use the MEMORY STOP function.
- The MEMORY STOP function does not operate during shuffle play, program play, single-selection repeat, A ↔ B repeat, or single-selection stop.
- When the power was turned off, the MEMORY STOP function does not operate and playback will start from the beginning of the disc.

### Discs with [CX] Label

Discs bearing the [CX] label are recorded with the [CX] noise reduction system, which gives lower noise levels and higher dynamic range. The [CX] indicator should automatically light up. Some [CX] discs do not include the code necessary to automatically activate the player's [CX] noise reduction system. If the [CX] indicator does not light, press the [CX] button on the Remote Commander to manually activate the system.



#### To stop playback and remove disc

4



Remove disc and press the OPEN/CLOSE button to close the tray.

#### To play a stereo LD or a second audio program (SAP) LD

5

After playback has started



Reproduced sound		Indicator lights
Stereo disc	SAP disc	
Stereo	Audio signal (1) (left channel) Audio signal (2) (right channel)	1/L 2/R



Left channel	Audio signal (1) (left channel)	1/L
--------------	------------------------------------	-----



Right channel	Audio signal (2) (right channel)	2/R
---------------	-------------------------------------	-----



Return to start		
-----------------	--	--

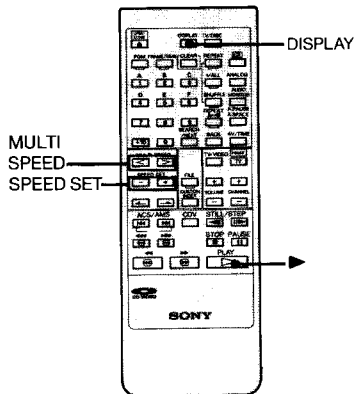
#### To switch between digital and analog sound on an LD

If the LD contains a digital stereo sound signal, the player automatically sends that to the output jacks. Pressing the ANALOG button on the Remote Commander switches to the analog audio signal and turns the DIGITAL SOUND indicator off. Press the ANALOG button a second time to return to digital sound output.

With certain discs, there may be a difference in volume between the digital and the analog sound.

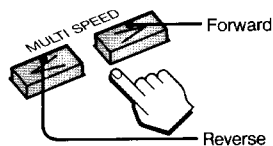
## To Change Playback Speed and Direction

—Speed Play (CAV standard-play)

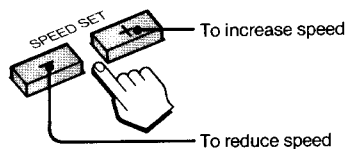


## To change the speed

1 Select the playback direction.

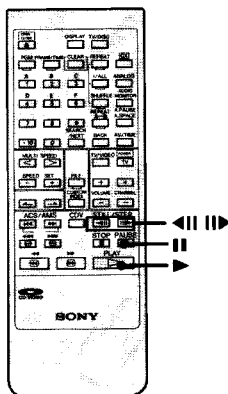


2 Select the playback speed.



## To Play Frame by Frame

—Freeze-frame, STEP playback (CAV standard-play)



## To view a still picture:

—Freeze-frame



The screen stops at the current frame.  
Press the ► button to resume normal playback.

### Sound during speed play

Audio output occurs only during  $\times 1$  (normal) speed play in the forward direction. There is no sound output for other speed and direction combinations.

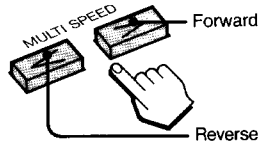
### CLV discs

Speed play, freeze-frame and step playback are not possible with CLV discs.

When a multispeed button is pressed, the indication "SIDE A CLV" (or "SIDE B CLV") is shown for 3 seconds. When the ► button is pressed, the screen becomes blue and the indication "SIDE A CLV" (or "SIDE B CLV") is shown.

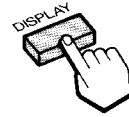


## To change the direction

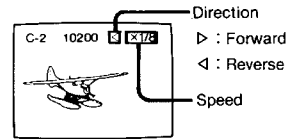


Press the ► button to resume normal playback.

## To display the speed and direction



The direction and speed appear on the screen for 2-3 seconds.



Speed indication	Speed (approx)
×10	10 times normal speed
×5	5 times normal speed
×3	3 times normal speed
×2	2 times normal speed
×1	Normal speed
×1/2	1/2 normal speed
×1/4	1/4 normal speed
×1/8	1/8 normal speed
×1/16	1/16 normal speed
×1/30	1/30 normal speed
×1/90	1/90 normal speed

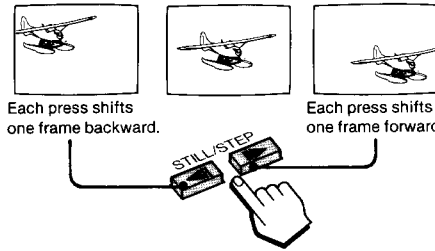
Press the ► button to resume normal playback.

## To view one frame at a time:

—STEP playback



Press once for freeze-frame.



Hold the button down for continuous frame by frame viewing.  
Press the ► button to resume normal playback.

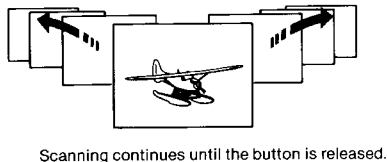
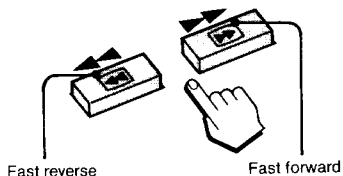
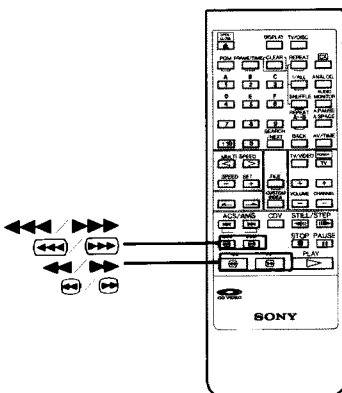
### Discs with automatic picture stop code

When a recorded picture stop code is encountered during speed playback (at × 1, 1/2, 1/4, 1/8, 1/16, 1/30, 1/90), the unit automatically stops at that frame. To resume playback, press the ► button or one of the ◀◀▶▶, ⏪, ⏩, </> buttons.

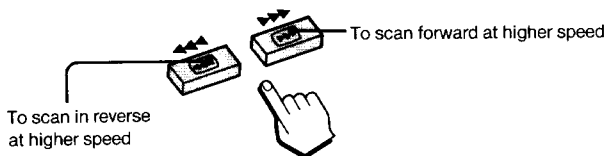
### During freeze-frame or step playback operation

There is no sound output.

# To Search for a Particular Scene —Scanning

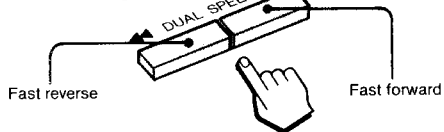


## To scan at higher speed

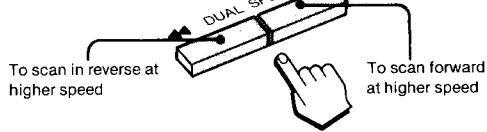


## Using the buttons on the main unit

For normal scan in forward or reverse, press the button lightly.



For high-speed scan in forward or reverse, press the button firmly.



### While scanning in either direction

- There is no sound output.
- The image during scanning with a CLV disc will be in black and white with some instability.
- Scanning speed varies according to the position on the CLV disc.
- A certain amount of noise is inevitable with all scanning operations.

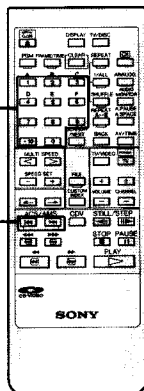
### To check the current chapter/track and frame/time numbers

These numbers appear in the display window on the player. Press the DISPLAY button on the Remote Commander to display them on the screen.

# To Search for a Particular Scene

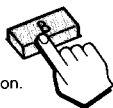
—Searching by Chapter/Track Number

Number buttons



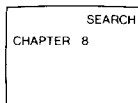
## Direct chapter or track search

**Example** Locate the beginning of chapter 8.



Press "8" button.

If you've pressed the wrong number, simply press the correct one.



Searching for chapter 8.

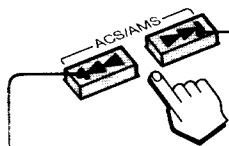


Playback starts.

### CAV

On the CAV disc, search can occur while in freeze-frame, pause, and speed play operation as well as normal playback. When the desired chapter appears after search, playback will continue in the same mode.

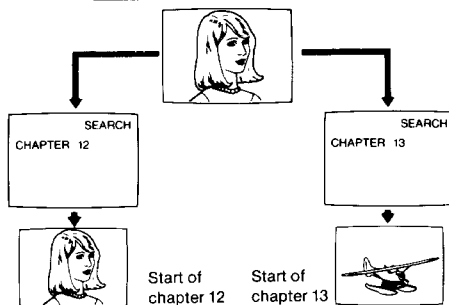
## Skip chapter or track search



Press once to return to the start of the current chapter/track. Press a second time—before the picture reappears—to return to the start of the previous chapter/track.

Press to advance to the start of the next chapter/track.

**Example** Current chapter = 12



### To enter a number greater than 10

Use the +10 and "0" buttons.

Examples: 14:  $+10 \rightarrow 4$   
20:  $+10 \rightarrow +10 \rightarrow 0$

If the +10 button was pressed by mistake

Press the button repeatedly to revert to 0— or 1—.

### Notes

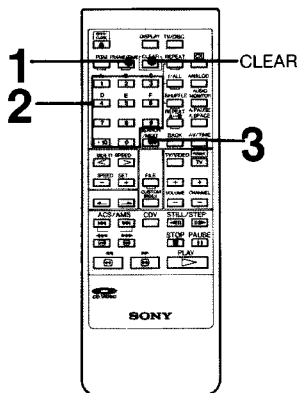
- The chapter search feature will not function if the disc does not include chapter numbers. In this case, the screen message will give only frame or time numbers.
- If a chapter number not contained on an LD is entered, playback stops. If the REPEAT function is on (see page 26), playback will resume from the start of the disc.
- During CDV playback, the unit will not accept entry of track numbers not contained on the disc.

## To Search for a Particular Scene

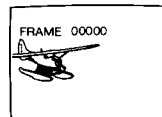
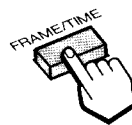
### —Searching by Frame Number

Each picture on a standard-play disc is called a frame.

**Example** Locate frame number 12340.



**1** Press the FRAME/TIME button.

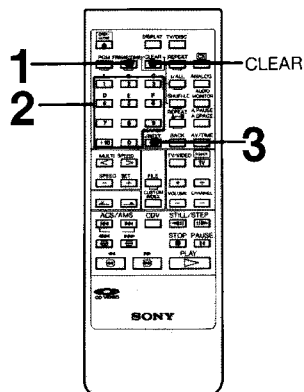


## To Search for a Particular Scene

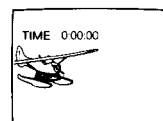
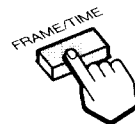
### —Searching by Time

Extended-play discs keep track of position as elapsed time from the beginning of the disc.

**Example** Locate the 12 min 05 sec point.



**1** Press FRAME/TIME button.



#### Frame search

##### To check the current chapter and frame numbers

These numbers appear in the display window on the player. Press the DISPLAY button on the Remote Commander to display them on the screen.

##### To cancel frame search

Before SEARCH/NEXT button was pressed: Press the CLEAR button.

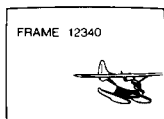
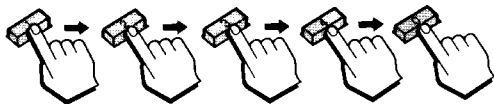
After SEARCH/NEXT button was pressed: Press the ■ button.

#### Warning

If a frame number not contained on a disc is entered, playback stops. If the REPEAT function is on (see page 24), playback will resume from the start of the disc.



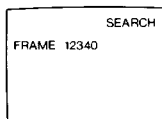
## 2 Enter the frame number.



### If you make a mistake

Press the FRAME/TIME button once more to return the display indication to zero, and then enter the correct number.

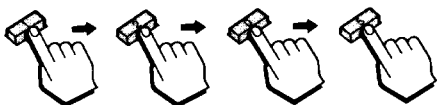
## 3 Press SEARCH/NEXT button.



Playback starts at that number.

Search can occur while in the freeze-frame, pause, and speed play modes as well as the normal playback mode. When the desired frame appears after the search, playback continues in the same mode.

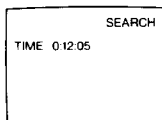
## 2 Enter the time.



### If you make a mistake

Press the FRAME/TIME button once more to return the display indication to zero, and then enter the correct number.

## 3 Press the SEARCH/NEXT button.



Playback starts at that number.

### Time search

#### To cancel time search

Before SEARCH/NEXT button was pressed: Press the CLEAR button.

After SEARCH/NEXT button was pressed: Press the  button.

#### To check the current chapter and time numbers

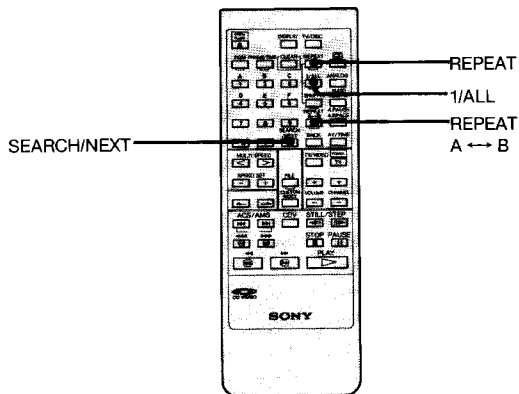
These numbers appear in the display window on the player.

Press the DISPLAY button on the Remote Commander to display them on the screen.

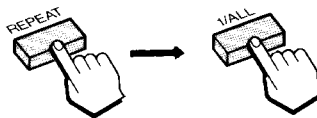
### Warning

- If the disc does not include time data to the second, enter the time in minutes only.
- If the number selected is greater than the total time of the disc, playback stops. If the REPEAT ALL function is on, however, playback then resumes from the beginning of the disc.

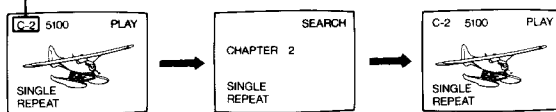
## To Play Repeatedly



### To repeat the current chapter or track



Current chapter/track



(Shown on TV screen when DISPLAY button is pressed) REPEAT, SINGLE lights up in the player's display window.

When the player reaches the end of the chapter/track, it automatically repeats that chapter/track.

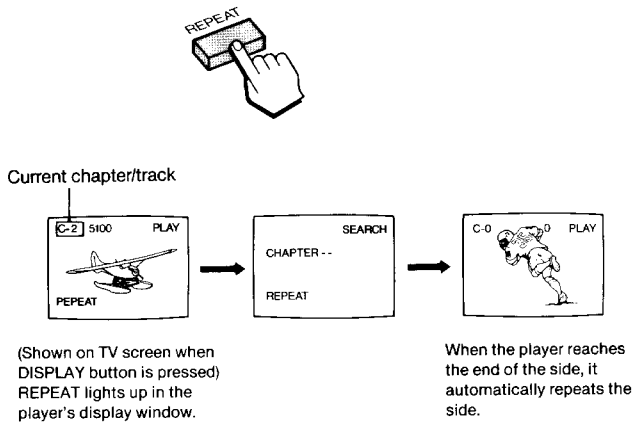
#### To use custom repeat

To carry out repeat playback between two predefined points on the disc, refer to page 26.

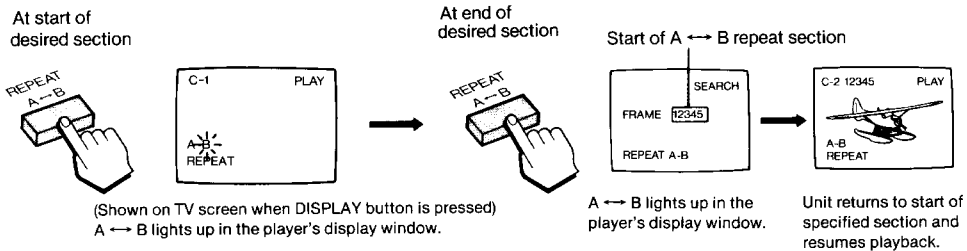
#### To cancel A ↔ B repeat

Press the CLEAR button.

## To repeat the entire side of the disc



## To repeat a specific section of a disc



### To cancel repeat functions other than A ↔ B

Press the REPEAT button again to cause the REPEAT indication in the display window to go out. (The same button that was used to activate repeat—on the main unit or the Remote Commander—must be pressed to cancel it.)

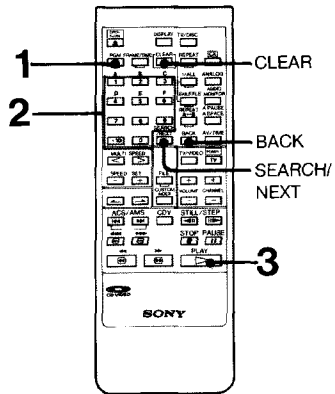
### To check the current status

Check the indicators in the display window or use the DISPLAY button to verify the current setting on screen.

## To Play Only Certain Chapters/Tracks —Program Playback

This function plays up to 20 chapters or tracks in a specified order.

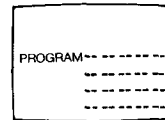
**Example** Play LD chapters 5, 4, 2, and 6—in that order.



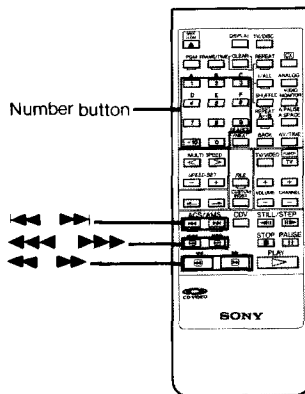
## 1 Press the PGM button.



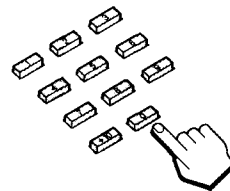
PGM indication lights in the player's display window.



## To Search for a Particular Selection



## To search by track number



Enter the track number.

### To play a single track once

Use the 1/ALL button on the remote control to call up the SINGLE display. Then select the track with the numerical buttons. When the track has been played, the unit enters the stop mode. To release the setting, press the 1/ALL button again.

### When a wrong number was entered

Press the button for the correct number.

### To release or cancel program playback

Press the CLEAR button or the 1/ALL button. The unit reverts to normal playback.

### To repeat program playback

Use the REPEAT button to call up the REPEAT display.

### To enter chapter numbers over 10

Use the +10 and "0" buttons.

Examples: To enter 14: **+10** → **4**  
To enter 20: **+10** → **+10** → **0**

### If the +10 button was pressed by mistake

Press the button repeatedly to revert to— or 1-.

### To move to a preceding or following programmed track

Press the ◀ or ▶ button.

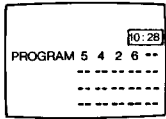
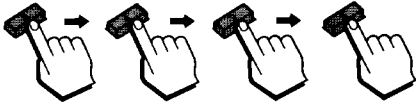
### To check the program contents

Press the PROGRAM button. The program is displayed for about 3 seconds. The currently playing program number is flashing.

### Warning

- When the ◀ or ▶ button is kept depressed during program playback and the end of the current selection is reached, the next programmed chapter or track is played back. When the ◀ or ▶ button is kept depressed, the start of the current selection is located, but the unit does not go back to previous tracks or chapters.
- When a program contains chapter or track numbers which are not on a disc, the program may not be carried out.
- Program contents are stored until the disc is removed or the power is switched off.

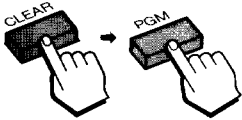
## 2 Enter the chapter numbers.



For LDs containing TOC (Table of Contents) data, the total playback time of programmed chapters is shown.

If you make a mistake

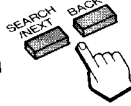
**To start over**



Press the CLEAR and PGM button and enter the correct numbers.

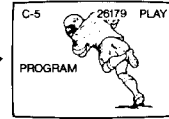
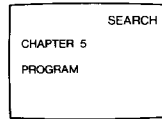
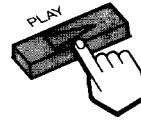
**To change a number**

Press the NEXT (to advance) or BACK (to back up) buttons until the incorrect number on the screen flashes.



Enter a new number

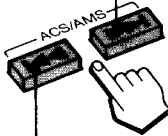
## 3 Press the ► button.



The player searches for and then plays the first chapter/track specified—chapter 5 here. After playing all programmed chapters, playback stops.

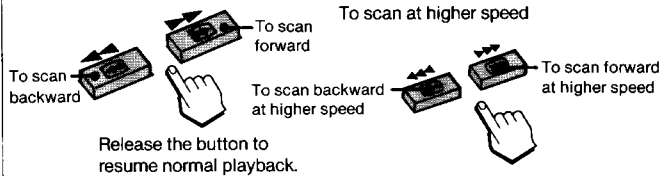
## To skip selections

Press to advance to the next selection.



Press once to return to the beginning of the current selection. Press again to return to the previous selection.

## To search for a particular point

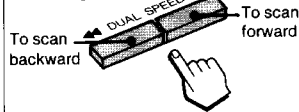


### To scan with the buttons on the main unit

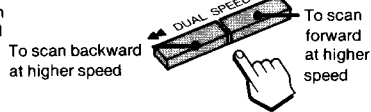
Normal scan

To scan at higher speed

Press lightly.



Press strongly.

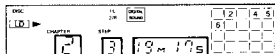


### LD with TOC Data

When a program was entered for an LD containing TOC data, the following display is shown.

Example:

5, 4, 2, 6 are programmed.



Currently playing chapter

Total playback time of all programmed chapters

Order in which the chapter is programmed

If the chapter number 0 or track or chapter numbers higher than 20 were programmed, on if the total playback time exceeds 100 minutes, the total playback time is not shown.

### To enter chapter numbers over 10

Use the +10 and "0" buttons.

Example: To enter 14: [+10] → [4]  
To enter 20: [+10] → [+10] → [0]

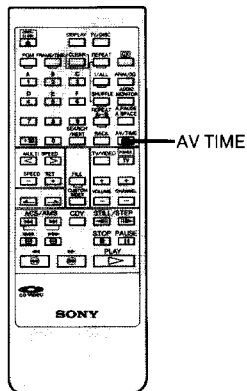
### If the +10 button was pressed by mistake

Press the button repeatedly to revert to ---.

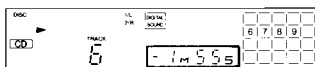
### Sound during search

When scan is started from the playback mode, the sound can be heard at a low level. When scan was started from the pause mode, the sound is muted.

# To Change Time Display



Elapsed time for selection



Time remaining for selection



Remaining selections on the disc

Total remaining playback time \*

Reverts to elapsed time for selection

\* With a CDV disc, these figures refer only to the portion (audio/video) currently in use.

## Display on TV screen

If the TV set or monitor connected to the player is on and the DISPLAY button is pressed, the track number, time, and other information recorded on the CD/CDV appears on a green background on the screen.

## Note

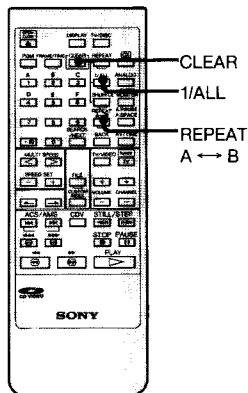
The remaining time will not be displayed for a track number higher than 20.

## Note on LD discs

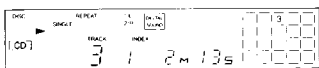
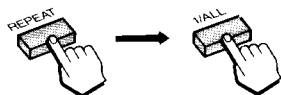
The time display function is available only with an LD containing TOC data.

First, the elapsed time or the number of frames is displayed. Pressing the AV TIME button then changes the time display as shown above.

# To Play Repeatedly



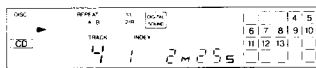
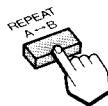
## To repeat the current selection —SINGLE Repeat



Current selection (track) is continuously repeated. Deactivate REPEAT display to repeat selection only once.

## To repeat a specific section of a disc — A ↔ B Repeat

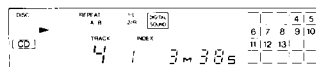
At start of desired section



At end of desired section

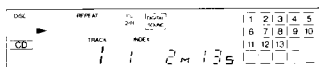


Flashing of A ↔ B indicator stops and the specified section is continuously repeated.



To cancel A ↔ B Repeat, press the CLEAR button.

## To repeat all selections —ALL Repeat



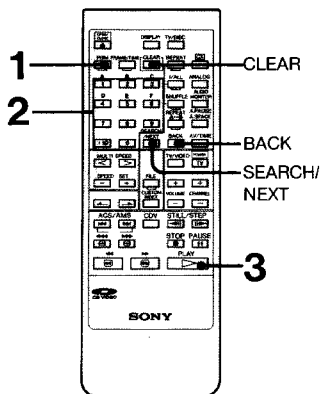
The entire disc is continuously repeated.

### To cancel ALL or SINGLE Repeat

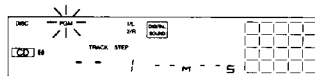
Press the REPEAT button that was used to activate repeat—on the main unit or the Remote Commander— again.

## To Play Only Certain Selections

**Example** Play tracks 5, 4, 2, and 6—in that order.



**1** Press the PGM button.



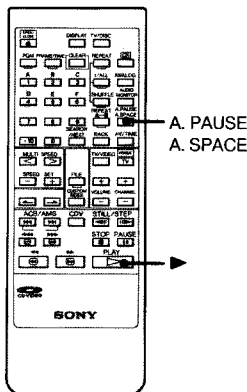
## Auto Pause

After a selection is played, the player enters the pause mode.

## Auto Space

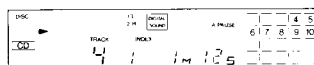
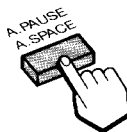
A blank interval of 3 seconds is inserted between playback of each selection.

The same button is used to activate auto pause and auto space.



## Auto Pause

Press the A. PAUSE/A. SPACE button.



To start playback of next selection  
Press the ► button.

### To release or cancel program playback

Press the CLEAR button or the SINGLE/ALL button. The unit reverts to normal playback.

### To enter chapter numbers over 10

Use the +10 and "0" buttons.

Examples:

To enter 14: +10 → 4

To enter 20: +10 → +10 → 0

### If the +10 button was pressed by mistake

Press the button repeatedly to revert to -- or 1-.

### To check track and time information on a TV or monitor screen

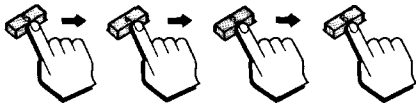
Turn on power to the TV or monitor. Time and track for the CD/CDV is shown on the screen.

### During program play

The numbers on the AV calendar display go out as selections are played. The contents of a program are stored until the disc is removed or the player is turned off.

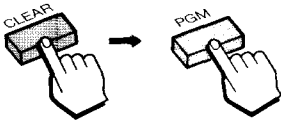


## 2 Enter the track numbers.



If you make a mistake

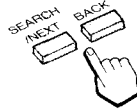
To start over



Press the CLEAR and PGM button and enter the correct numbers.

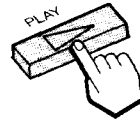
To change a number

Press the NEXT (to advance) or BACK (to back up) buttons until the incorrect number on the screen flashes.



Enter a new number.

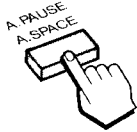
## 3 Press the ► button.



The player searches for and then plays the first selection specified—track 5 here. After playing all programmed tracks, playback stops.

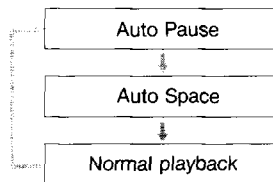
## Auto Space

Press the A. PAUSE/A. SPACE button.



## To return to normal playback

Each press of the A. PAUSE/A. SPACE button cycles the unit through the following conditions.



### Note

Once program playback begins, there are two ways to switch to a different chapter/track in the program:

- (1) Use the ►► button to advance to the next chapter/track on the list. Using the ◀◀ button will return the player to the beginning of the current chapter/track and no further.
- (2) To switch to the previous or next program

Use the ◀◀ and ►► buttons (forward or reverse) as you normally would to skip chapters/tracks within the program list.

- Track numbers not contained on a disc cannot be entered.

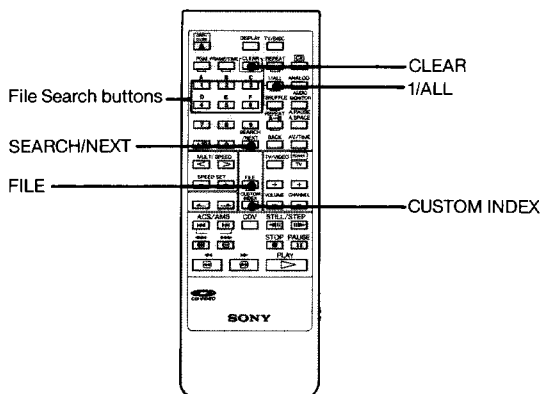
### Program playing time

The total playing time of the program is displayed, only when tracks with numbers under 20 are programmed and the total playing time is less than 100 minutes.

### To repeat a program

Press the REPEAT button to cause the REPEAT indicator in the display window to light up.

# Custom Index



## Custom Index

The Custom Index function lets you set up to six index marks at any point on the disc. Playback can then be started from an index point at the push of a button, and repeat playback between index points is also possible.

This chapter explains how to set custom index marks on an LD, but the function can also be used for CDs or CDVs.

### Index point rearrangement

The custom index points are arranged on the disc not by the order in which they were input but by their relative location from the start of the disc. If a new index mark is set before an old one, the A, B, C, ... order is rearranged.

### Note

While custom index search is performed, the A, B, C, ... file search indicators go out one by one, but the indicator for the last index point remains lit.

### Custom index with a CDV disc

Although playback begins from the video portion, files will be arranged from the audio portion in A, B, C order.

## To set a custom index mark

Press the FILE button during playback.



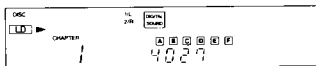
Up to six locations anywhere on the disc can be marked.



Indicators A, B, C, etc. light up for each custom index mark.

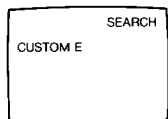
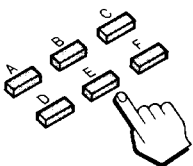
## Custom Index Search

### 1 Press the CUSTOM INDEX button.



The AV calendar goes out and the number buttons 1 – 6 act as file search buttons A – F.

### 2 Press the file search button for the desired location.



Playback starts from the specified index point and continues until the end of the disc.

### To jump to another index point

Press the corresponding file search button.

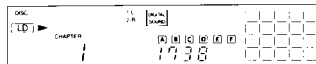
### To return to normal playback

Press the CUSTOM INDEX button or the CLEAR button.

## If you make a mistake



Use the SEARCH/NEXT button to cause the file indicator to flash.



Press the CLEAR button and then press the FILE button at the correct location.

## To play a section between custom index points once

Press the 1/ALL button, so that the indication SINGLE is shown on the display window. Then perform custom index search to the desired index start point.

The section between this point and the next custom index point is played once.

## To play a section between custom index points repeatedly

Press the 1/ALL button, so that the indication SINGLE is shown on the display window and press the REPEAT button to activate the REPEAT display. Then perform custom index search to the desired index start point.

The section between this point and the next custom index point is continuously repeated.

## How is the custom index stored?

The custom index data are not actually recorded on the disc but stored in the memory of the player.

Therefore the custom index points set with one player cannot be used when the disc is played on another unit.

## To clear a custom index mark

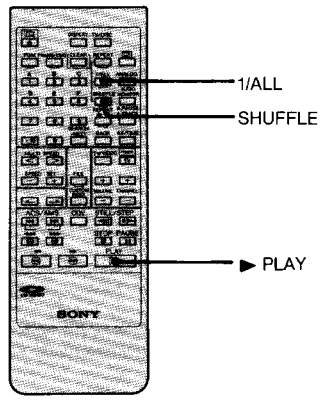
Information on index marks is retained also when the player is switched to normal playback. To cancel a stored index mark, use the SEARCH/NEXT button to cause the corresponding file search indicator to flash, and then press the CLEAR button.

## Note

When the disc is removed or the player is turned off, the contents of the custom index are lost.

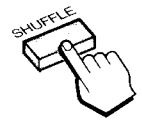
# Shuffle Playback

The selections on the disc can be played back in a random order.

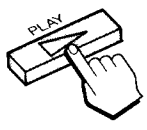


## To play all tracks or chapters on a disc

1 Press the SHUFFLE button.



2 Press the ▶ button.



All selections on the disc are played once in random order. After all selections have been played, the unit enters the stop mode.

### To cancel shuffle playback

Press the CLEAR button or the 1/ALL button. Normal playback resumes from the next selection.

When an LD without TOC data is inserted, the indication "NO TOC" appears on the display window, and shuffle playback cannot be carried out.

### To skip to the next selection in shuffle play

Press the ►► button. Returning to a previous selection with the ◀◀ button is not possible.

### Shuffle play with CDV discs

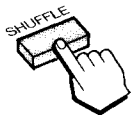
Selections from the audio part and video part are played in random order.

### Delete shuffle

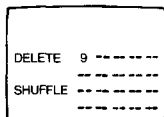
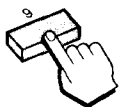
This function lets you exclude specific chapters or tracks from shuffle play. When the function is used, DELETE SHUFFLE appears on the display window.

## To play only certain selections (delete shuffle)

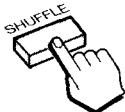
1 Press the SHUFFLE button.



2 Enter the chapter number or track number of the selection you do not wish to play.

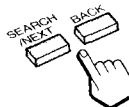


If you make a mistake



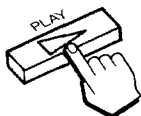
Press the CLEAR button and then press the SHUFFLE button again and enter the correct number.

Use the SEARCH/NEXT or BACK button to cause the wrong number to flash on the display.



Enter the correct number.

3 Press the ► button.



The player automatically selects a random program without the deleted selections.

**To resume normal playback**

Press the CLEAR button or the 1/ALL button.

**To repeat shuffle or delete shuffle play**

Press the REPEAT button to activate the REPEAT indication. When the unit is turned off or the disc is removed, shuffle functions are cancelled.

**SHUFFLE button timing**

To ensure correct operation, do not press the SHUFFLE button immediately after the disc tray has closed, but only after the PLAY indication in the display has stopped flashing.

# Specifications

Type CD/CDV/LD Player  
 Signal readout Optical (Laser beam reflection)  
 Signal format EIA standard, NTSC color  
 Playing time

LD	CAV	30 cm (12 in) double-sided	60
		20 cm (8 in) double-sided	28
		20 cm (8 in) single-sided	14
	CLV	30 cm (12 in) double-sided	120
		20 cm (8 in) double-sided	40
		20 cm (8 in) single-sided	20
CD	12 cm (5 in) single-sided	74	
	8 cm (3 in) single-sided	20	
CDV	Audio portion	20	
	Video portion	5	

(minutes)

**Remote Commander RMT-322A**  
 Principle of operation Infrared pulse  
 Power requirements 3 V DC, (2 size AA batteries)  
 Dimensions Approx. 62 × 20 × 175 mm (w/h/d)  
 (2<sup>1</sup>/<sub>16</sub> × 3<sup>3</sup>/<sub>4</sub> × 7 inches)  
 Weight Approx. 130 g (including batteries), (4<sup>1</sup>/<sub>2</sub> oz)

## Supplied accessories

Remote Commander RMT-322A (1)  
 Size AA (R6) batteries (2)  
 External antenna connector (for MDP-322GX only) (1)  
 Coaxial cable with F-type connector (1)  
 Video connecting cord (phono plug 1 ↔ phono plug 1) (1)  
 Audio connecting cord (phono plug 2 ↔ phono plug 2) (1)  
 AC plug adaptor (for MDP-322GX only) (1)

Design and specifications are subject to change without notice.

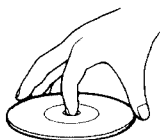
## Digital audio specifications

Frequency response 4 Hz to 20 kHz (+0.5 dB, -1.0 dB)  
 Signal-to-noise ratio More than 107 dB  
 Dynamic range More than 98 dB  
 Total harmonic distortion 0.003% or less  
 Channel separation More than 100 dB  
 Wow and flutter Below measurement limit (±0.001% W.PEAK)  
 Horizontal video resolution 425 lines  
 Video output 1.0 Vp-p, 75 ohms, unbalanced  
 Audio output Analog: 200 mVrms (1 kHz, 40% modulation)  
 Digital: 200 mVrms (1 kHz, -20 dB)  
 VHF input/output 75 ohms, unbalanced LD output, NTSC channel 3 or 4 (switchable)  
 Headphone output 28 mW (32 ohms), impedance = 8 ohms  
 Power requirements MDP-210: 120 V AC, 60 Hz  
 MDP-322GX: 100/120/220/240 V AC adjustable, 50/60 Hz  
 MDP-322GX (tourist model): 120/220/240 V AC adjustable, 50/60 Hz  
 Power consumption 40 watts  
 Weight MDP-210: Approx. 7.8 kg (17 lb 3 oz)  
 MDP-322GX: Approx. 7.7 kg (17 lb)  
 Dimensions Approx. 430 × 110 × 400 mm (w/h/d)  
 (17 × 4<sup>3</sup>/<sub>8</sub> × 15<sup>3</sup>/<sub>4</sub> inches)  
 Operating temperature +5°C to +35°C  
 Ambient humidity 5 to 90%

# Notes on Handling Discs

Handle the disc by its edge, and to keep the disc clean, do not touch the rainbow colored surface.

CD  
CDV



Correct

LD



Correct

Do not stick paper or tape on the labeled surface.



Wrong

Do not expose the disc to direct sunlight or heat sources such as hot air ducts, or leave it in a car parked in direct sunlight where there can be a considerable rise in the temperature.

Before playing, clean the disc with the cleaning cloth. Wipe the disc from the center out.



Do not use solvents such as benzene, thinner, commercially available cleaners or anti-static spray intended for analog record discs.

After playing, remove the disc and store it in its case.

## Glossary

### CAV disc

The Constant Angular Velocity (CAV) or standard-play disc rotates at a constant 1800 rpm. Each track, or the path traced by the laser for a single rotation of the disc, produces a single frame. Each side of the disc holds up to 54,000 frames, the equivalent of 30 minutes of playback. Each frame has a number that is stored with the data on the disc.

### CLV disc

The Constant Linear Velocity (CLV) or extended-play disc doubles the maximum playing time to 60 minutes by varying the rotational speed from a maximum of 1800 rpm to a minimum of 600 rpm as the laser beam moves away from the center of the disc. The disc surface therefore moves past the laser head at a constant rate, and each track is longer than its predecessor.

### Digital sound disc

Some LDs include a high-quality digital audio signal as well as a more conventional analog signal. This unit reproduces both signals with priority placed on the digital audio signal.

### Chapter number

Some discs are divided into sections, called chapters. Such discs usually have a list of chapters on the jacket or label. Each chapter is numbered for easy location with the chapter search function, or for use with the repeat and program functions.

### Frame number

The frames on standard-play (CAV) discs are sequentially numbered for rapid access with the frame search function.

### Time number

Extended-play (CLV) discs calculate position in terms of playing time from the start of the disc. The time search function provides rapid access to desired scenes.

### Track number

CD and CDV discs assign track numbers to each selection. Rapid access to desired tracks is possible with the track search function. Track numbers are also used with repeat and program functions.

### LD with TOC (Table of Contents)

Among various LD software, there are discs with TOC (Table of Contents) signals recorded. When playing back LDs with TOC signals, the additional features given below can be enjoyed.

- Playback time display for one chapter (CAV, CLV)
- Remaining playback time (CAV, CLV)
- Time display for CAV disc
- AV calendar display
- Shuffle, delete shuffle

# Troubleshooting

Check the following before requesting service.

Symptom	Point to check
No power.	<ul style="list-style-type: none"><li>• Power cord properly plugged into AC outlet?</li></ul>
Playback ► button does not produce playback.	<ul style="list-style-type: none"><li>• Unit correctly plugged in?</li><li>• Disc inserted?</li><li>• Disc properly seated?</li><li>• Recorded side facing upward?</li></ul>
► indicator lights, but there is no picture or sound.	<ul style="list-style-type: none"><li>• TV or monitor switched on?</li><li>• TV properly connected to player?</li><li>• Input selector of TV, TV tuner, or monitor set to required position?</li></ul> <p><b>TV without audio/video inputs</b></p> <ul style="list-style-type: none"><li>• Channel selectors on player and TV set to the same number?</li><li>• TV channel properly adjusted?</li><li>• TV/DISC selector set to DISC? (Is the DISC indicator lit?)</li></ul>
Poor picture or sound quality.	<ul style="list-style-type: none"><li>• TV properly connected to player?</li><li>• Any sources of noise nearby?</li><li>• Disc dirty or scratched?</li><li>• Any condensation on player objective lens?</li></ul> <p><b>TV without audio/video inputs</b></p> <ul style="list-style-type: none"><li>• Channel selectors on player and TV set to the same number?</li><li>• TV channel properly adjusted?</li></ul>
No sound.	<ul style="list-style-type: none"><li>• TV properly connected to player?</li><li>• Volume control on TV, monitor, TV tuner, or amplifier high enough?</li><li>• Playback at normal speed? (The videodisc player produces sound only during normal playback and speed play at normal speed in the forward direction.)</li></ul>
No TV programs.	<ul style="list-style-type: none"><li>• TV properly connected to player?</li><li>• TV/DISC selector set to TV? (Is the DISC indication out?)</li></ul>
Remote Commander does not operate.	<ul style="list-style-type: none"><li>• Player switched on?</li><li>• Batteries correctly inserted?</li><li>• Batteries exhausted?</li><li>• Any obstacles between Remote Commander and player sensor?</li><li>• Cord connected to CONTROL S jack?</li></ul>
Unit does not operate and LD/CD/CDV indication in display window flashes.	<ul style="list-style-type: none"><li>• Turn power off and then on again.</li></ul>
Picture distorted during scan.	<ul style="list-style-type: none"><li>• Some distortion in the lower part of the picture is normal—even for CAV discs.</li></ul>